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1.(Twice Amended)A tool piece comprising:

(a) a hardmetal body;

(b) an additional body contiguously contacting the hardmetal body; [and]

(c) a substantially discontinuous gradient-free boundary, formed at a temperature less than a temperature for forming a liquid phase and a superatmospheric pressure, between the hardmetal body and the additional body; and

(d) a mating surface between the hardmetal body and the additional body including macro mating features having a macro feature area to a perturbated macro feature area ratio comprising slightly greater than about 1:2 to about 1:50.

2.(Amended)The tool piece according to Claim 1, [further including a mating surface between the hardmetal body and the additional body] wherein the macro feature area to the perturbated macro feature area ratio comprises slightly greater than about 1:3 to about 1:50.

3.(Amended)The tool piece according to Claim 1[2], wherein the mating surface includes a male portion on one of the bodies and a corresponding female portion on the other of the bodies.

4.(Amended)The tool piece according to Claim 1[3], wherein the mating surface is symmetrical.

7.(Amended)The tool piece according to Claim 1[3], wherein the mating surface is asymmetrical.

8.(Amended)The tool piece according to Claim 1[3], further including micro mating features thereby having both micro and macro mating features.

11.(Amended)The tool piece according to Claim 1[8], wherein the [micro feature and macro feature comprise a] macro feature area to the [a] perturbated macro feature area ratio [comprising] comprises slightly greater than about 1:2 [1:1] to about 1:25 [1:50].

12.(Amended)The tool piece according to Claim 11, wherein the [micro feature and macro feature comprise a] macro feature area to the [a] perturbated macro feature area ratio [comprising] comprises slightly greater than about 1:2 [1:1] to about 1:10.

13.(Amended)The tool piece according to Claim 1[8], wherein the micro mating feature comprises a size of about 100μm to about 1cm.

15.(Twice Amended)A tool piece, the tool piece comprising:

(a) a hardmetal body including a hard particle component and a binder;

(b) an additional body contiguously contacting the hardmetal body; and

(c) a substantially discontinuous gradient-free boundary, formed at a temperature less than a temperature for forming a liquid phase and a superatmospheric pressure, between the hardmetal body and the additional body; and

(d) a mating surface between the hardmetal body and the additional body including micro mating features and macro mating features, the macro mating features having a macro feature area to a perturbated macro feature area ratio comprising slightly greater than about 1:2 to about 1:25.

25.(Twice Amended)A tool piece, the tool piece comprising:

(a) a hardmetal body including a hard particle component and a binder;

(b) an additional body contiguously contacting the hardmetal body;

(c) a substantially discontinuous gradient-free boundary, formed at a temperature less than a temperature for forming a liquid phase and a superatmospheric pressure, between the hardmetal body and the additional body; and

(d) a mating surface between the hardmetal body and the additional body including macro mating features having a macro feature area to a perturbated macro feature area ratio comprising slightly greater than about 1:2 to about 1:50.

26.(Amended)A method for producing a tool piece, the method comprising:

forming a mixture by mechanically mixing a hard particle component with a binder or binder precursor;

shaping the mixture into a green body;

juxtaposing an additional body and to green body

consolidating the juxtaposed green body and additional body at a preselected temperature, superatmospheric pressure and time at temperature and time at superatmospheric pressure sufficient to form a hardmetal body and a substantially discontinuous gradient-free boundary between the hardmetal body and the additional body, at least a portion of the time at superatmospheric pressure is at the preselected temperature, wherein a mating surface at the boundary between the hardmetal body and the additional body includes macro mating features having a macro feature area to a perturbated macro feature area ratio comprising slightly greater than about 1:2 to about 1:50.

42.(Amended)The tool piece according to Claim 25, [further including a mating surface between the hardmetal body and the additional body] wherein the macro feature area to the perturbated macro feature area ratio comprises slightly greater than about 1:3 to about 1:50..

43.(Amended)The tool piece according to Claim 25[42], wherein the mating surface includes a male portion on one of the bodies and a corresponding female portion on the other of the bodies.

44.(Amended)The tool piece according to Claim 25[43], wherein the mating surface is symmetrical.-

47.(Amended)The tool piece according to Claim 25[43], wherein the mating surface is asymmetrical.

48.(Amended)The tool piece according to Claim 25[43], further including micro mating features thereby having both micro and macro mating features.

51.(Amended)The tool piece according to Claim 25[48], wherein the [micro feature and macro feature comprise a] macro feature area to the [a] perturbated macro feature area ratio [comprising] comprises slightly greater than about 1:3 [1:1] to about 1:25 [1:50].

52.(Amended)The tool piece according to Claim 51, wherein the [micro feature and macro feature comprise a] macro feature area to the [a] perturbated macro feature area ratio [comprising] comprises slightly greater than about 1:3 [1:1] to about 1:10.

53.(Amended)The tool piece according to Claim 25[48], wherein the micro mating feature comprises a size of about 100μm to about 1cm.

Remarks

The Applicants first wish to thank the Examiner for the courtesy extended to Applicants' attorney during the telephonic interview on February 13, 2003.

The Office Action mailed November 22, 2002 has been carefully considered. After such consideration, Claims 1-4, 7, 8, 11-13, 15, 25, 26, 42-44, 47, 48, and 51-53 have been amended along the lines suggested by the Examiner. As such, Claims 1-63 remain in the case with none of the claims being allowed.

The Office Action had rejected Claims 1, 2, 15-19, 21, 22, 23, 42, 55-58, 60-62 under 35 U.S.C. 102(b) as being anticipate by WO 99/03624 (WO'624). In addition, the Office Action had rejected Claims 3-14 and 43-53 under 35 U.S.C. 103(a) as being unpatentable over WO '624. Further, the Office Action had rejected Claims 24, 54, 59 and 63 under 35 U.S.C. 103(a) as being unpatentable over WO '624. Applicants submit that the amendment of independent Claims 1, 15, 25, and 26 along the lines suggested by the Examiner renders moot the rejection of: (i) Claims 1, 2, 15-19, 21, 22, 23, 42, 55-58, 60-62 under 35 U.S.C. 102(b); (ii) Claims 3-14 and 43-53 under 35 U.S.C. 103(a) and (iii) Claims 24, 54, 59 and 63 under 35 U.S.C. 103(a). The 35 U.S.C. 102(b) and 35 U.S.C. 103(a) rejections being moot should be withdrawn.

The Applicants submit that by this amendment they have placed Claims 1-63 of the case in condition for immediate allowance and such action is respectfully requested. However, if any issue remains unresolved, Applicant's attorney would welcome the opportunity for a telephone interview to expedite allowance and issue.

Respectfully submitted,

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